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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

MAKI, STEVEN D

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/864,925

Applicant(s)

EROMAKI, PENTTI JUHANI

Examiner

Steven D. Maki

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2004 and 23 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 4-9, 25-30 and 32-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 10-24, 31 and 35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date. 012604.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

1) Newly submitted claims 32-34 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Original claims 1-31, drawn to a tread in which (a) a width of the webs is at most five times a width of the slits or (b) a height of the nubs decreasing as the tire wears out, the height being smaller than a prevailing depth of the slit that decreases during the wearing out of the tire, classified in class 152, subclass 209.18.
- II. Claims 32-34, drawn to a tread including multiple circumferentially spaced rows comprised of at least two pattern block sets, the pattern block sets comprising first and second substantially similar pattern blocks, the first pattern block being positioned on an opposite side of a tire center plane as the second pattern block, and at least two rows of at least two laterally adjacent slits extending in a direction that is generally transverse to a circumferential direction, classified in class 152, subclass 209.1.

The inventions are distinct, each from the other because:

Inventions II and I are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the combination fails to require

(a) a width of the webs is at most five times a width of the slits or (b) a height of the nubs decreasing as the tire wears out, the height being smaller than a prevailing depth of the slit that decreases during the wearing out of the tire. The subcombination has separate utility such as an asymmetrical tread having blocks on only one side of the tire center plane, a tread in which the blocks on one side of the tire center plane are different from the blocks on the other side of the tire center plane, a tread having circumferentially extending slits, a tread having a single row of slits in each block or a tread having rows of one pattern block set instead of at least two pattern block sets.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 32-34 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

2) The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3) Claim 35 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 35, subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention (i.e. the new matter) is "substantially uniformly deforming webs which deform at a substantially constant rate as a height of the webs decreases as the tire wears out". Although the original disclosure describes that the webs deform as shown in figure 10, the original disclosure does not reasonably convey "substantially uniformly deforming webs which deform at a substantially constant rate as a height of the webs decreases as the tire wears out". Where is the support for this subject matter?

- 4) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 5) Claims 1-3, 10-22 and 35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1 line 2, it is unclear what has the outer surface. In claim 1 line 2, it is suggested to delete --on a tire carcass--.

In claim 35, the scope and meaning of "substantially uniformly deforming webs which deform at a substantially constant rate as a height of the webs decreases as the tire wears out" is unclear.

- 6) Claim 20 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is

required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 20 broadens amended claim 1 since it merely requires "the tear depth being substantially smaller than a slit depth" instead of " the tear depth being substantially smaller than the slit depth and at least 0.5 mm" as set forth in amended claim 1.

7) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8) **Claims 1-3, 10-24, 31 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan '710 (JP 7-40710) in view of Caratta (US 6382283) and optionally Japan '418 (JP 8-244418).**

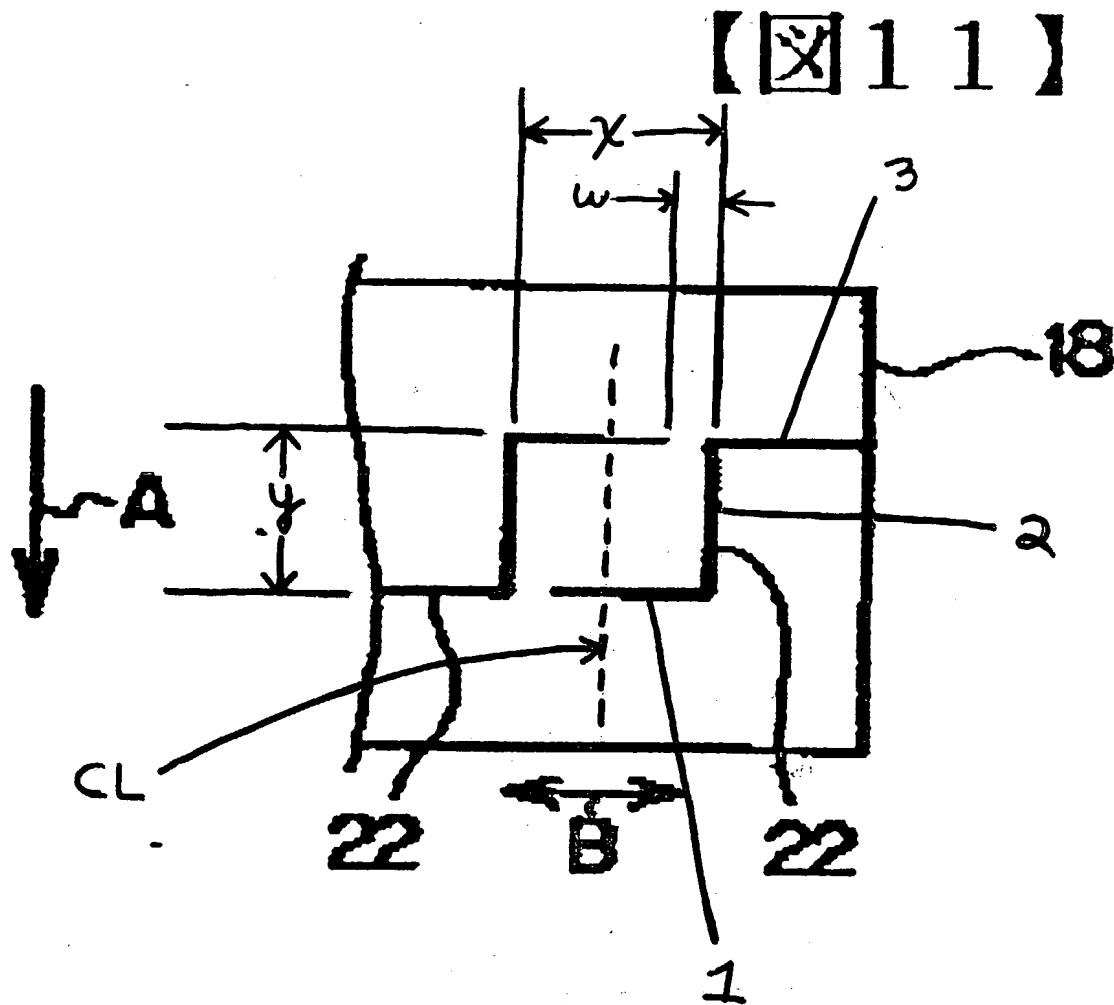
Japan '710, Caratta and Japan '418 are applied as in paragraph 6 of the last office action dated 10-22-03 (paragraph 6 of the last office action dated 10-22-03 is incorporated herein by reference).

Applicant argues (1) Japan '710 says nothing concerning the width of the transverse gap being proportionately limited by the width of the sipes and (2) the circumferential spacing of the sipes has little to do with the spacing between one end of one sipe and the bend of the next sipe. Applicant's arguments are not persuasive. First: The term "sipe" is a term of art in the tread art, which by itself instructs one of ordinary skill in the art that a slit having a small width is being described. Examples of

suitable widths for sipes include 0.5 mm and 0.7 mm. See Caretta and Japan '418.

Second: Japan '710 specifically illustrates a crank shaped sipes (each having two legs connected by an intermediate portion) and arranging those crank shaped sipes in a transverse row such that the crank shaped sipes overlap and the end of one sipe is spaced by the bend in another sipe by only a small gap. The overlapping crank shaped sipes define "rectangular shaped nub" having a length, which is generally about the same as its height wherein the height is defined by the circumferential spacing of the sipes. The *combination* of the sipes having the specifically illustrated *crank shape* in which the intermediate portion has a length substantially equal to the length of the legs , *"sipe" being a term of art descriptive of a small width* and the *substantial overlap* of the crank shape sipes shown in figure 11 necessarily requires the circumferential and gap spacings between the sipes be related to the sipe width.

As to claim 1, applicant argues that the prior art does not teach a spacing at most five times the width of the sipes since the shortest spacing of the sipes in Caretta is six times the sipe width and the shortest spacing of the sipes in Japan '418 is eight times the width of the sipes. First: The issue is not the ratio of the "sipe spacing" (the spacing between the sides of sipes) to "sipe width". Instead the issue is the ratio of the "gap spacing" (the spacing between the end of one crank shaped sipe and the bend of another crank shaped sipe) to "sipe width". Second: Caretta and Japan '418 constitute evidence as to what the sipe width and spacings in Japan '710 can and should be. In order to facilitate discussion of the teachings of the applied prior art, an enlarged marked up copy of Japan '710's figure 11 is provided below:



The markings were added by the examiner. In figure 11, the circumferential sipe spacing" is y, the transverse sipe spacing is x and the gap spacing (the width of the web) is w. If the sipe width is 0.5 mm, a gap spacing w of 2.5 mm or less satisfies the claimed limitation of "at most five times". If the sipe spacing x is 4 mm, then the gap spacing w must be less than 2.5 mm since (1) 50% of sipe spacing x is 2 mm and (2) as can be clearly seen from the marked up copy, the gap spacing w is less than 50% of sipe spacing x. As to a sipe width of 0.5 mm, Japan '710 teaches that figure 11 shows

sipes 22 and Caretta and Japan '418 suggest using a sipe width of 0.5 mm for sipes.

As to a sipe spacing of 4 mm, the sides of the sipes 22 in figure 11 are spaced from each other and Caretta and Japan '418 suggest spacing the sides of sipes by a distance for example of 4 mm.

As to claim 23, applicant comments that conventional tires do not have webs whereas claim 23 requires webs which maintain block rigidity. Examiner comments the overlapping crank shaped sipes in Japan '710's figure 11 define a "web" which like that of applicant has a width equal to the small gap spacing and a thickness equal to the sipe width. Since Japan '710's webs have the same structure as applicant's webs, the Japan '710 webs have a decreasing web height as claimed.

Furthermore, applicant argues that the applied prior art fails to teach the recitation of the tear depth being at least 0.5 mm and a tear depth substantially less than the slit depth (claims 1 and 23) and substantially uniformly deforming webs which deform at a substantially constant rate as a height of the webs decreases as the tire wears out (new claim 35). The limitations of the tear depth being at least 0.5 mm and a tear depth substantially less than the slit depth (claims 1 and 23) and "substantially uniformly deforming webs which deform at a substantially constant rate as a height of the webs decreases as the tire wears out" (new claim 35) would have been obvious since Japan '710's overlapping crank shape sipes in the rubber tread define webs having a small web width (this being equal to the gap spacing) and a small web thickness (this being the same as the sipe width of for example 0.5 mm); it being noted that (1) tear depth is descriptive of the ability of the web to deform and (2) one of

ordinary skill in the art would readily expect a rubber web thickness of 0.5 mm as suggested by the applied prior art would deform and wear as claimed.

Allowable Subject Matter

9) Claim 2 would be allowable if (1) rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims and (2) amended to include the subject matter shown figure 1 (this subject matter being the row of interlaced slits being inclined with respect to the circumferential direction and the web being formed between the end of one slit and the intermediate section of another slit).

Although (a) it is known to incline sipes in a block (Europe 775600 figure 1, US 5711828 figure 1) and (b) it is known to incline a row of inclined crank shaped sipes (Japan '807 63-278807 figure 4), there is no motivation to further modify Japan '710 such that in addition to having the claimed web width and tear depth, the resulting tire has a row of interlaced slits being inclined with respect to the circumferential direction and the web being formed between the end of one slit and the intermediate section of another slit.

Remarks

10) Applicant's arguments filed 1-23-04 and 2-23-04 have been fully considered but they are not persuasive.

The certified English translation of applicant's foreign priority document has been received. Accordingly, applicant has perfected his 119 foreign priority claim and Japan '413 has been removed as a reference.

The 112 second paragraph rejections in the last office action have been withdrawn in view of the amendments filed 1-23-04 and 2-23-04. However, note the new 112 second paragraph rejection necessitated by the amendment of claim 1.

11) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

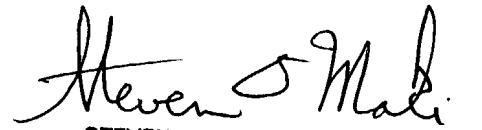
12) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1733

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki
May 16, 2004


STEVEN D. MAKI
PRIMARY EXAMINER
~~GROUP 1300~~
Au 1733
5-16-04